



The State of New Hampshire
Department of Environmental Services



Michael P. Nolin
Commissioner

March 17, 2005
Letter of Deficiency
DSP#05-005

Mr. Robert Naylor
Superintendent
Town of Newport
Water and Sewer Dept.
15 Sunapee Street
Newport, NH 03773

RE: Gilman Pond Dam #240.01, Unity

Dear Mr. Naylor:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on December 2, 2004. During this visual inspection and/or file review, the following deficiencies were observed:

1. It appears that there is erosion on the upstream slope of the embankment which is undermining the large rip rap located to the left of the spillway;
2. The spillway discharge channel currently runs along the toe of the embankment. The toe of the embankment just downstream of the concrete spillway retaining wall appears to be eroding;
3. There is a horizontal crack in the left spillway abutment wall located approximately at spillway crest elevation and extends the entire length of the wall (the crack is visible in the 1997 inspection photos);
4. There is a 1/4" crack in the left spillway abutment wall which extends through the thickness of the wall located approximately 6 feet from the upstream most end of the wall; and
5. The operation and maintenance plan (O&M) has not been updated since 1998.

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

On a Continuing Basis:

1. Monitor the upstream slope of the embankment for signs of erosion and undermining of the rip rap and repair as necessary;

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2. Based on the hydrologic analysis of the dam, the spillway has adequate discharge capacity to pass the 50 year 24 hour event with a minimum of 1 foot of freeboard assuming the flashboards are not installed. The dam should be operated with no boards, if the owner would like to operate the dam with boards, a detailed hydrologic/hydraulic analysis should be conducted by engineer licensed in the State of New Hampshire to ensure the dam can pass the design event with a minimum of 1 foot of freeboard;
3. Review and update the O&M plan as necessary;

By October 1, 2005:

4. Armor the embankment along the spillway discharge channel to prevent erosion and scour from high flows. Consideration should be given to re-directing the discharge channel away from the toe of the dam or protecting the toe from scour;
5. At the next sufficient lowering of the impoundment, seal the horizontal crack located in the left spillway abutment wall that extends the entire length of the wall. If the crack becomes worse, it could lead to seepage through the wall which would saturate the embankment and possibly lead to a slope failure; and
6. Repair the 1/4" wide crack in the left spillway abutment wall located approximately 6 feet from the upstream most end of the wall.

DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise, DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the bottom of the previous page.

Sincerely,



Jeffrey M. Blaney, P.E.
Dam Safety Engineer

Attachments DB13, Sketch Illustrating Deficiencies, Copy of O&M Currently On File

cc: Gretchen R. Hamel, Legal Unit Administrator ✓

Town of Unity

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